Figure 1. FGF-20

```
+1    M  A  P  L  A  E  V  G  G  F  L  G  G  L  E  G  L  G  Q  Q
      ATGGCTCCCTTAGCCGAAGTCGGGGGCTTTCTGGGCGGCCTGGAGGGCTTGGGCCAGCAG
      TACCGAGGGAATCGGCTTCAGCCCCCGAAAGACCCGCCGGACCTCCCGAACCCGGTCGTC
               10        20        30        40        50        60

+1    V  G  S  H  F  L  L  P  P  A  G  E  R  P  P  L  L  G  E  R
      GTGGGTTCGCATTTCCTGTTGCCTCCTGCCGGGGAGCGGCCGCCGCTGCTGGGCGAGCGC
      CACCCAAGCGTAAAGGACAACGGAGGACGGCCCCTCGCCGGCGGCGACGACCCGCTCGCG
               70        80        90        100       110       120

+1    R  S  A  A  E  R  S  A  R  G  G  P  G  A  A  Q  L  A  H  L
      AGGAGCGCGGCGGAGCGGAGCGCCCGCGGCGGGCCGGGGGCTGCGCAGCTGGCGCACCTG
      TCCTCGCGCCGCCTCGCCTCGCGGGCGCCGCCCGGCCCCCGACGCGTCGACCGCGTGGAC
               130       140       150       160       170       180

+1    H  G  I  L  R  R  R  Q  L  Y  C  R  T  G  F  H  L  Q  I  L
      CACGGCATCCTGCGCCGCCGGCAGCTCTATTGCCGCACCGGCTTCCACCTGCAGATCCTG
      GTGCCGTAGGACGCGGCGGCCGTCGAGATAACGGCGTGGCCGAAGGTGGACGTCTAGGAC
               190       200       210       220       230       240

+1    P  D  G  S  V  Q  G  T  R  Q  D  H  S  L  F  G  I  L  E  F
      CCCGACGGCAGCGTGCAGGGCACCCGGCAGGACCACAGCCTCTTCGGTATCTTGGAATTC
      GGGCTGCCGTCGCACGTCCCGTGGGCCGTCCTGGTGTCGGAGAAGCCATAGAACCTTAAG
               250       260       270       280       290       300

+1    I  S  V  A  V  G  L  V  S  I  R  G  V  D  S  G  L  Y  L  G
      ATCAGTGTGGCAGTGGGACTGGTCAGTATTAGAGGTGTGGACAGTGGTCTCTATCTTGGA
      TAGTCACACCGTCACCCTGACCAGTCATAATCTCCACACCTGTCACCAGAGATAGAACCT
               310       320       330       340       350       360

+1    M  N  D  K  G  E  L  Y  G  S  E  K  L  T  S  E  C  I  F  R
      ATGAATGACAAAGGAGAACTCTATGGATCAGAGAAACTTACTTCCGAATGCATCTTTAGG
      TACTTACTGTTTCCTCTTGAGATACCTAGTCTCTTTGAATGAAGGCTTACGTAGAAATCC
               370       380       390       400       410       420

+1    E  Q  F  E  E  N  W  Y  N  T  Y  S  S  N  I  Y  K  H  G  D
      GAGCAGTTTGAAGAGAACTGGTATAACACCTATTCATCTAACATATATAAACATGGAGAC
      CTCGTCAAACTTCTCTTGACCATATTGTGGATAAGTAGATTGTATATATTTGTACCTCTG
               430       440       450       460       470       480

+1    T  G  R  R  Y  F  V  A  L  N  K  D  G  T  P  R  D  G  A  R
      ACTGGCCGCAGGTATTTTGTGGCACTTAACAAAGACGGAACTCCAAGAGATGGCGCCAGG
      TGACCGGCGTCCATAAAACACCGTGAATTGTTTCTGCCTTGAGGTTCTCTACCGCGGTCC
               490       500       510       520       530       540

+1    S  K  R  H  Q  K  F  T  H  F  L  P  R  P  V  D  P  E  R  V
      TCCAAGAGGCATCAGAAATTTACACATTTCTTACCTAGACCAGTGGATCCAGAAAGAGTT
      AGGTTCTCCGTAGTCTTTAAATGTGTAAAGAATGGATCTGGTCACCTAGGTCTTTCTCAA
               550       560       570       580       590       600

+1    P  E  L  Y  K  D  L  L  M  Y  T  *
      CCAGAATTGTACAAGGACCTACTGATGTACACTTGA  (SEQ ID NO: 1)
      GGTCTTAACATGTTCCTGGATGACTACATGTGAACT  (SEQ ID NO: 2)
               610       620       630       640       650       660
```

Figure 2. FGF-23

```
   1  ATGCGCCGCCGCCTGTGGCTGGGCCTGGCCTGGCTGCTGCTGGCGCGGGCGCCGGACGCC    60
   1  M  R  R  R  L  W  L  G  L  A  W  L  L  L  A  R  A  P  D  A     20

  61  GCGGGAACCCCGAGCGCGTCGCGGGGACCGCGCAGCTACCCGCACCTGGAGGGCGACGTG    120
  21  A  G  T  P  S  A  S  R  G  P  R  S  Y  P  H  L  E  G  D  V     40

 121  CGCTGGCGGCGCCTCTTCTCCTCCACTCACTTCTTCCTGCGCGTGGATCCCGGCGGCCGC    180
  41  R  W  R  R  L  F  S  S  T  H  F  F  L  R  V  D  P  G  G  R     60

 181  GTGCAGGGCACCCGCTGGCGCCACGGCCAGGACAGCATCCTGGAGATCCGCTCTGTACAC    240
  61  V  Q  G  T  R  W  R  H  G  Q  D  S  I  L  E  I  R  S  V  H     80

 241  GTGGGCGTCGTGGTCATCAAAGCAGTGTCCTCAGGCTTCTACGTGGCCATGAACCGCCGG    300
  81  V  G  V  V  V  I  K  A  V  S  S  G  F  Y  V  A  M  N  R  R     100

 301  GGCCGCCTCTACGGGTCGCGACTCTACACCGTGGACTGCAGGTTCCGGGAGCGCATCGAA    360
 101  G  R  L  Y  G  S  R  L  Y  T  V  D  C  R  F  R  E  R  I  E     120

 361  GAGAACGGCCACAACACCTACGCCTCACAGCGCTGGCGCCGCCGCGGCCAGCCCATGTTC    420
 121  E  N  G  H  N  T  Y  A  S  Q  R  W  R  R  R  G  Q  P  M  F     140

 421  CTGGCGCTGGACAGGAGGGGGGGCCCCGGCCAGGCGGCCGGACGCGGCGGTACCACCTG    480
 141  L  A  L  D  R  R  G  G  P  R  P  G  G  R  T  R  R  Y  H  L     160

 481  TCCGCCCACTTCCTGCCCGTCCTGGTCTCCTGA  513   (SEO ID NO: 3)
 161  S  A  H  F  L  P  V  L  V  S  *   171   (SEQ ID NO: 4)
```

```
 Fgf-21  MAPLAEVGGF LGGLEGLGQQ VGSHFLLPPA GERPPLLGER RSAAERSA.R
  fgf-9  MAPLGEVGNY FGVQDAV..P FGNVPVLPV. .DSPVLLSDH LGQSEAGGLP
 fgf-16  ~~~MAEVGGV FASLDWDLHG FSSSLGNVPL ADSPGFLNER LGQIEGKLQR
 fgf-22  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~
xfgf-20  MAPLADVGTF LGGYDALG.Q VGSHFLLPPA KDSPLLFNDP LAQSERLS.R

 fgf-21  GGPGAAQLAH LHGILRRRQL YCRTGFHLQI LPDGSVQGTR QDHSLFGILE
  fgf-9  RGPAVTDLDH LKGILRRRQL YCRTGFHLEI FPNGTIQGTR KDHSRFGILE
 fgf-16  GSP..TDFAH LKGILRRRQL YCRTGFHLEI FPNGTVHGTR HDHSRFGILE
 fgf-22  ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~~~~~~ ~~~~~XGMLA
xfgf-20  SAP..SDLSH LQGILRRRQL YCRTGFHLQI LPDGNVQGTR QDHSRFGILE

 fgf-21  FISVAVGLVS IRGVDSGLYL GMNDKGELYG SEKLTSECIF REQFEENWYN
  fgf-9  FISIAVGLVS IRGVDSGLYL GMNEKGELYG SEKLTQECVF REQFEENWYN
 fgf-16  FISLAVGLIS IRGVDSGLYL GMNERGELYG SKKLTRECVF REQFEENWYN
 fgf-22  SYSVAVAMVT TRGVASRLYL DSNHKGDLYA SVRLAQESVF WGQSEENWSY
xfgf-20  FISVAIGLVS IRGVDTGLYL GMNDKGELFG SEKLTSECIF REQFEENWYN

 fgf-21  TYSSNIYKHG DTGRRYFVAL NKDGTPRDGA RSKRHQKFTH FLPRPVDPER
  fgf-9  TYSSNLYKHV DTGRRYYVAL NKDGTPREGT RTKRHQKFTH FLPRPVDPDK
 fgf-16  TYASTLYKHS DSERQYYVAL NKDGSPREGY RTKRHQKFTH FLPRPVDPSK
 fgf-22  THSSNLYKHV DTRRRYYVPL NQGATPSAGT RSLRRQNYTH VLPRPVDPDK
xfgf-20  TYSSNLYKHG DSGRRYFVAL NKDGTPRDGT RAKRHQKFTH FLPRPVDPEK

 fgf-21  VPELYKDLLM YT*     (SEQ ID NO: 2)
  fgf-9  VPELYKDILS QS*     (SEQ ID NO: 5)
 fgf-16  LPSMSRDLFH YR*     (SEQ ID NO: 6)
 fgf-22  VPELYKDILS QS*     (SEQ ID NO: 7)
xfgf-20  VPELYKDLMG YS*     (SEQ ID NO: 8)
```

FIG. 3

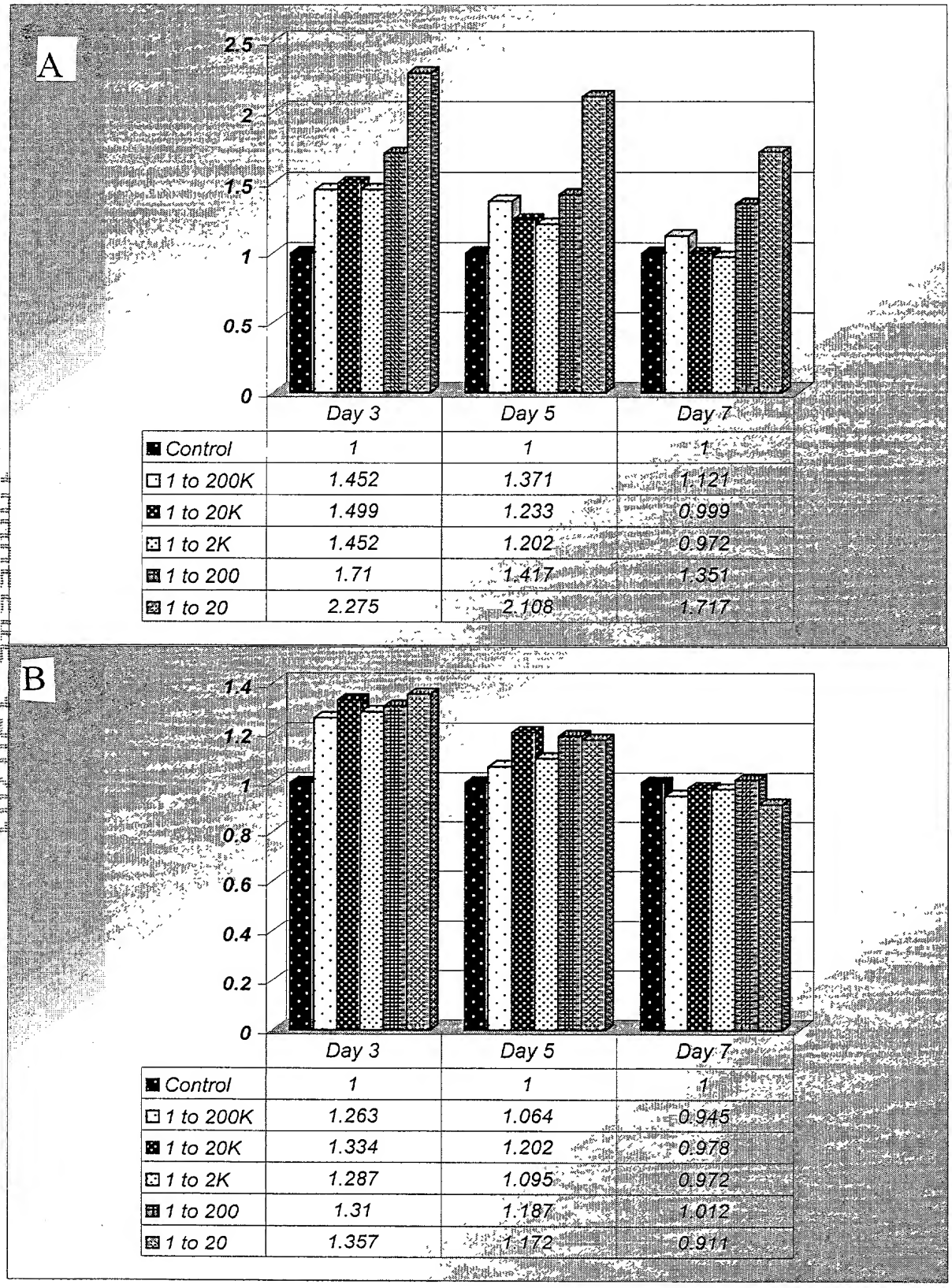
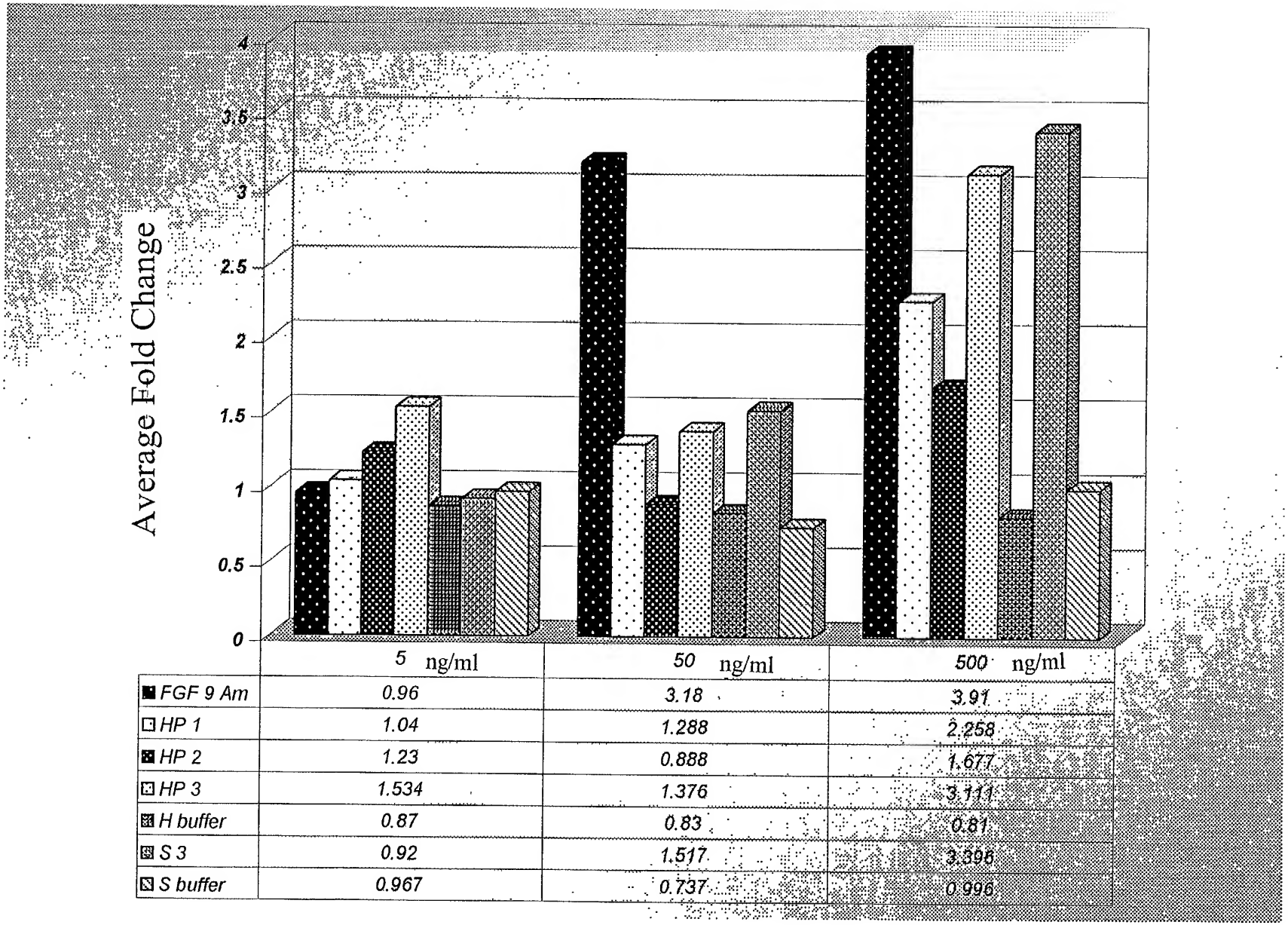
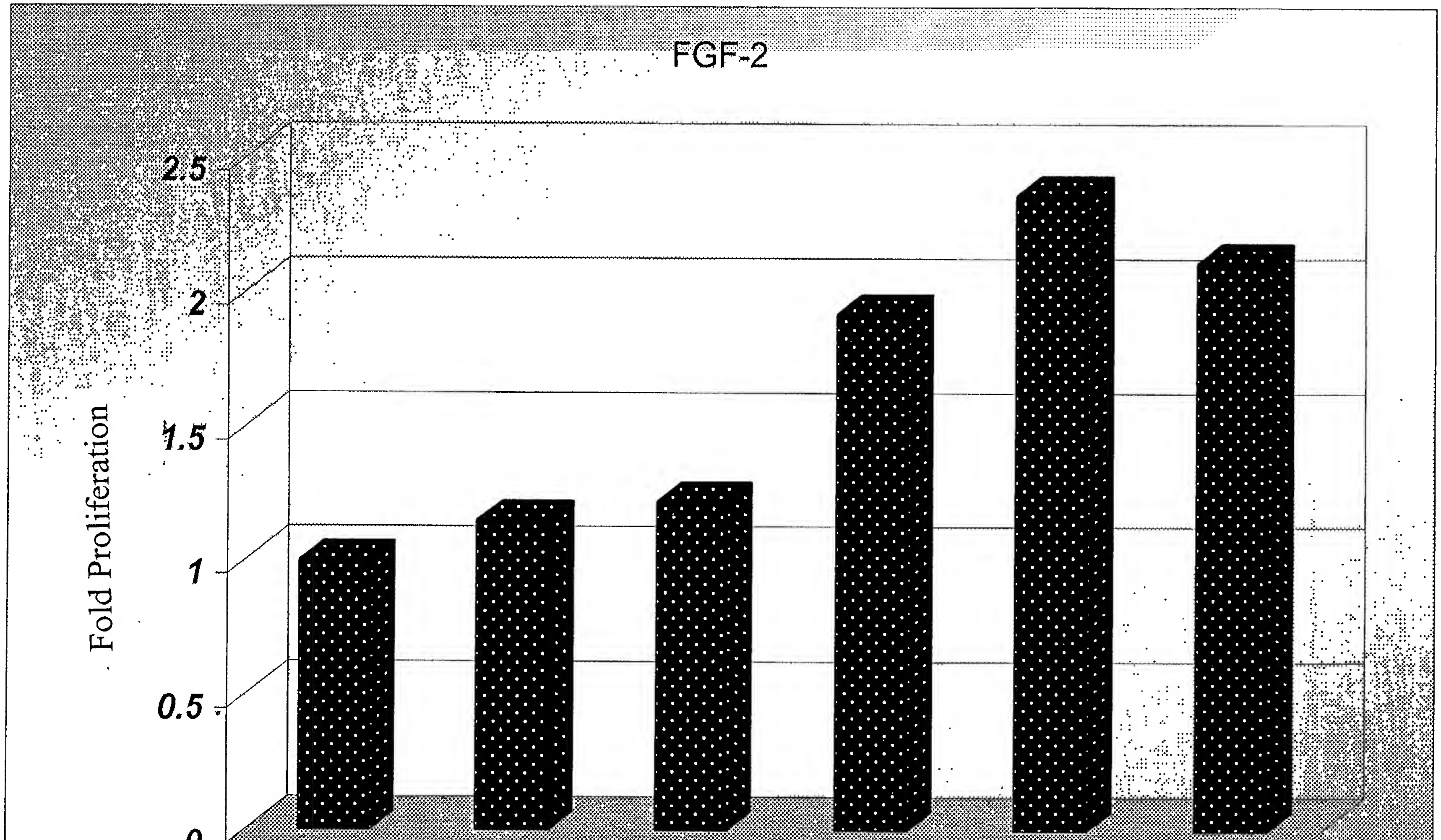

A
2.5
2
1.5
1
0.5
0
Day 3
Day 5
Day 7
Control 1 1 1
1 to 200K 1.452 1.371 1.121
1 to 20K 1.499 1.233 0.999
1 to 2K 1.452 1.202 0.972
1 to 200 1.71 1.417 1.351
1 to 20 2.275 2.108 1.717
B
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Day 3
Day 5
Day 7
Control 1 1 1
1 to 200K 1.263 1.064 0.945
1 to 20K 1.334 1.202 0.978
1 to 2K 1.287 1.095 0.972
1 to 200 1.31 1.187 1.012
1 to 20 1.357 1.172 0.911
Fold Proliferation

FIG. 4



	5 ng/ml	50 ng/ml	500 ng/ml
FGF 9 Am	0.96	3.18	3.91
HP 1	1.04	1.288	2.258
HP 2	1.23	0.888	1.677
HP 3	1.534	1.376	3.111
H buffer	0.87	0.83	0.81
S 3	0.92	1.517	3.396
S buffer	0.967	0.737	0.996

FIG. 5



	0 ng/ml	0.025 ng/ml	0.25 ng/ml	2.5 ng/ml	25 ng/ml	250 ng/ml
FGF-2	1	1.15	1.22	1.92	2.36	2.11

FIG. 6A

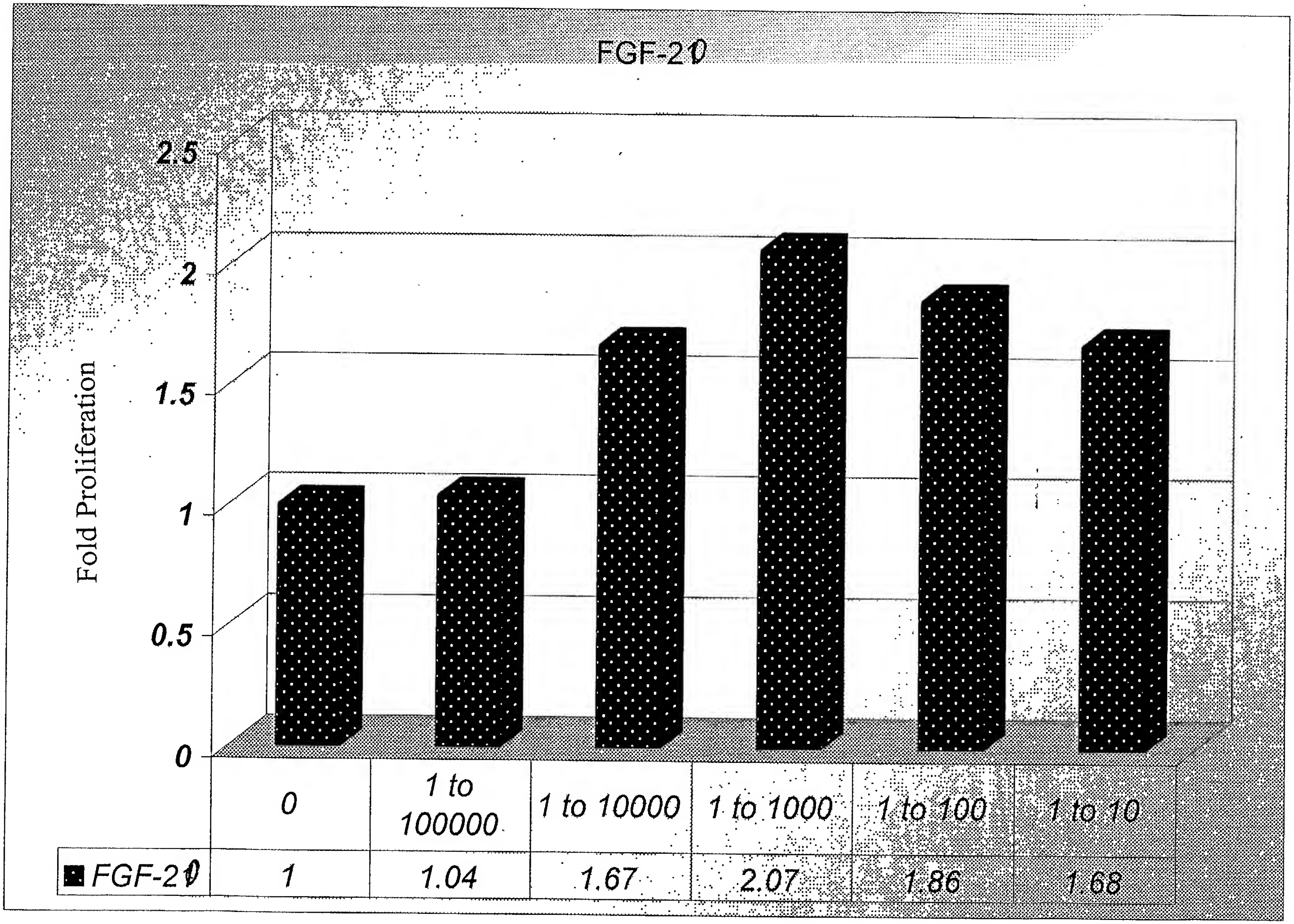
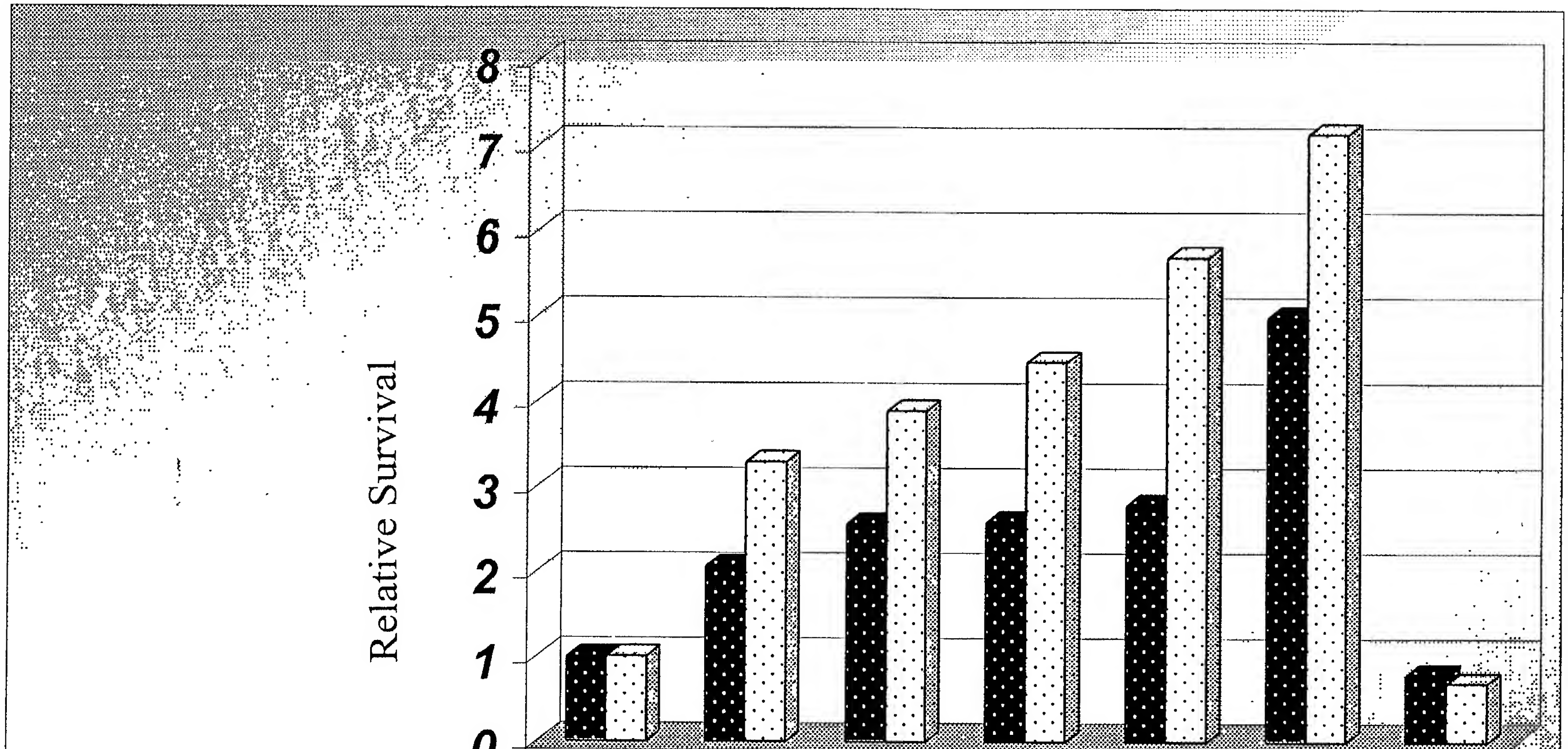
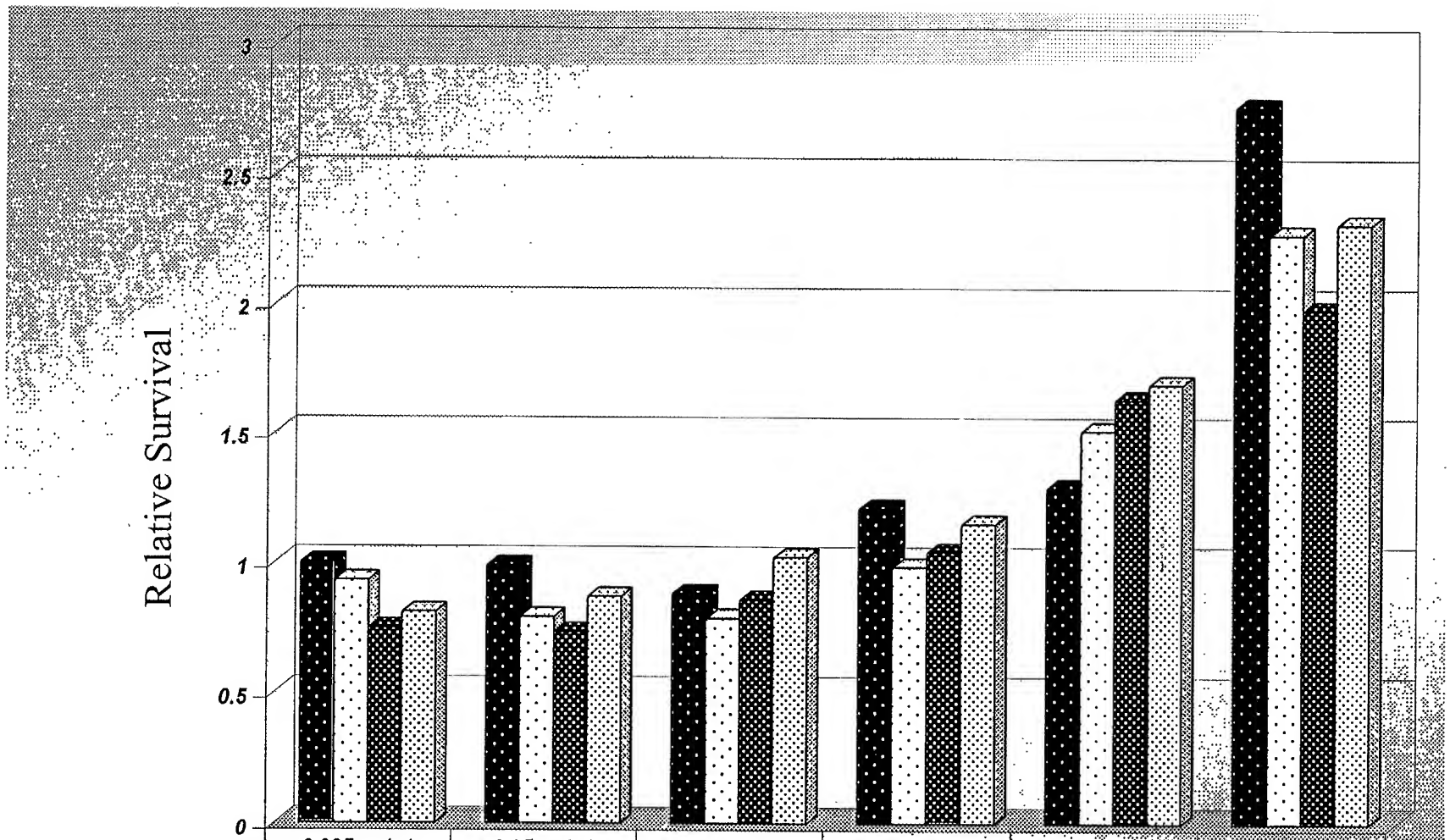

FGF-20
Fold Proliferation
2.5
2
1.5
1
0.5
0
0
1 to 100000
1 to 10000
1 to 1000
1 to 100
1 to 10
FGF-20
1
1.04
1.67
2.07
1.86
1.68

FIG. 6B



	0 ng/ml	0.025 ng/ml	0.25 ng/ml	2.5 ng/ml	25 ng/ml	250 ng/ml	2500 ng/ml
■ FGF-20 SO3 Day 7	0.995	2.06	2.56	2.58	2.78	4.99	0.79
□ FGF-20 SO3 Day 12	1	3.29	3.89	4.46	5.69	7.14	0.692

FIG. 7A



	0.025 ng/ml	0.25 ng/ml	2.5 ng/ml	25 ng/ml	250 ng/ml	2500 ng/ml
FGF-2, Day 5	1	0.988	0.88	1.21	1.29	2.76
FGF-9, Day 5	0.929	0.79	0.785	0.983	1.51	2.27
FGF-20, Day 5	0.747	0.732	0.856	1.04	1.63	1.98
FGF-20 SO3, Day 5	0.808	0.869	1.02	1.15	1.69	2.31

FIG. 7B

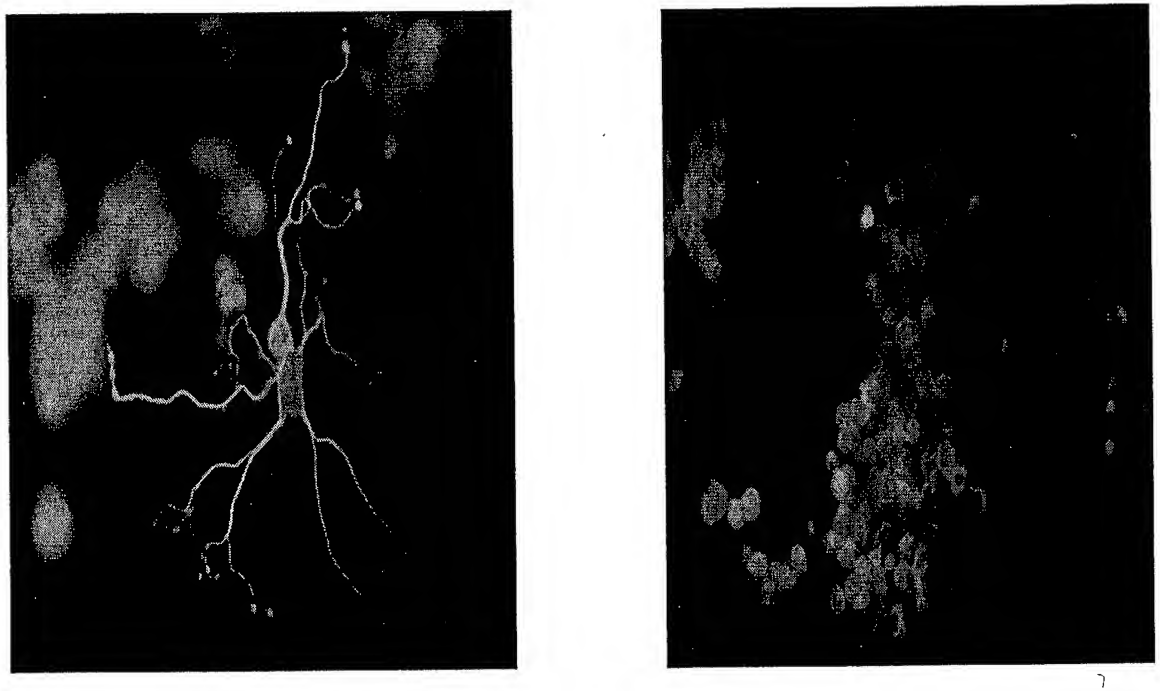


FIG. 8

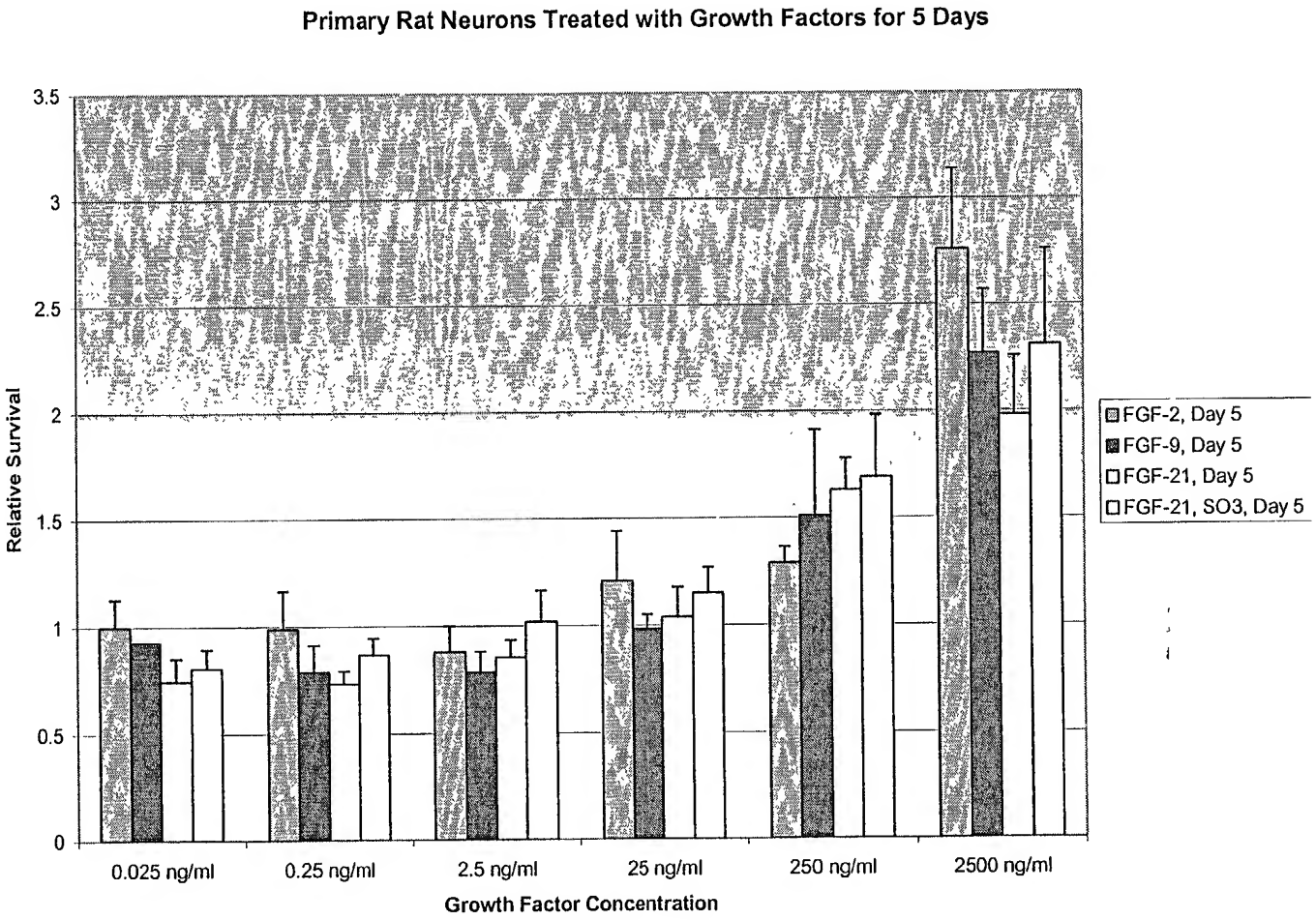


FIG. 9